An Evaluation of Quality of Service and Experience in E-commerce Platforms

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Abstract

E-commerce platforms adopt various strategies to attract and retain customers. Though customers could be attracted to the platform through strategies like discounts and offers, their retention or long term association with the platform can greatly depend on factors other than low prices. One such factor is the quality of service offered by the e-commerce platform.

Therefore, this study aimed at understanding the customer evaluation of quality of service offered by e-commerce platforms and also to evaluate the customer satisfaction with the quality of service offered by e-commerce platforms. For this purpose, data was collected from 652 respondents residing in Karnataka, India. Exploratory factor analysis extracted eight dimensions of e-service quality. The regression results revealed that quality of service offered by online platforms has a significant impact on the quality of customer experience.

Keywords: E-commerce, e-service quality, customer satisfaction.

Introduction

E-Commerce is the conduct of business on an online platform and the prevailing COVID-19 pandemic situation has given further impetus to the growth and acceptance of e-commerce as a business channel. The success of an e-commerce platform greatly depends on the quality of services provided to the customers; satisfaction can be determined by offering quality services. Zeithaml, Parasuraman and Malhotra[12] observed that though web presence and low prices were initially considered as the key factors for the success of e-commerce business, the focus now has been shifted towards service quality. Hence, offering of quality service has become the focal point in e-commerce operations.

The customers too expect an enriching and pleasant experience during their interaction with the e-commerce platform. The service quality of e-commerce sites depends on the efficient and effective shopping, purchasing and delivery of products and services facilitated by the website.[12]

Further, the customers evaluate the service quality of a website based on website design, fulfilment/reliability, security/privacy and customer service provided by the website.[11] The customer experience regarding the service quality offered by the e-commerce site is therefore essential in determining their satisfaction. The past studies have noted that quality of service provided by the online retailers is very significant in determining the customer satisfaction, customer loyalty and customer attitude towards the website.[3,8,11]

Many authors have emphasised that quality of service offered by the e-commerce platforms is essential in determining the customer satisfaction with the website. Recent studies have noted that with the growing awareness among the consumers relating to personal hygiene, health and safety, the demand for personal hygiene, home care and health care products is set to increase.[2]

Further, the apprehensions of the customers to shop at physical outlets owing to the risk of getting infected and the need for maintaining social distancing norms are causing a gradual shift in the consumer behaviour and millions of consumers are turning towards online platforms.[9] Therefore, this study is aimed at knowing the customer evaluation of quality of service offered by e-commerce platforms and their experience measured in terms of satisfaction related to the purchase of personal and healthcare products online.

Review of Literature

Quality of Service in E-commerce: Zeithaml et al[12] explained e-service quality (*e-SQ*) as the extent to which a website facilitates efficient and effective shopping, purchasing and delivery of products and services. Further, Wolfinbarger and Gilly[11] developed a scale named *eTailQ* and this scale encompassed four dimensions of e-service quality, namely, website design, fulfilment/reliability, security/privacy and customer service.

According to the authors, website design allows the customers to easily navigate the website, search for the information needed for informed choice, easily place an order and personalize the website features to suit the individual customer needs. Fulfilment/ reliability dimension of e-service quality refers to the accuracy of products displayed in the website, correctness of product description given and delivery of the right product within the stipulated time. Customer service is the efficiency with which customer queries are answered in the website.

Finally, security/privacy relates to the security of financial details of the customer and the privacy of personal information shared by the customer in the website. Parasuraman, Zeithaml and Malhotra[8] also introduced E-S-QUAL and E-RecS-QUAL scales to evaluate the service

quality in the online shopping context. The E-S-QUAL scale comprised of four dimensions: efficiency, system availability, fulfillment and privacy.

Similarly, E-RecS-QUAL scale is a three dimension scale including responsiveness, compensation and contact. Efficiency refers to ease and speed at which the website could be accessed by the customer. Fulfillment is all about the availability of products in the website and the delivery of order accurately. System availability relates to the technical aspects of the website and privacy is the degree of safety and protection available to information shared by the customer while transacting in the website. Also, responsiveness is related to the handling of customer issues and product returns. *Compensation* referred to the compensations offered to the customers for the problems they faced. The *contact* dimension of the scale aimed at measuring the extent of customer assistance available.

Quality of Experience or Customer Satisfaction: Quality of Experience is a measure of the overall level of customer satisfaction with the service provider.

According to Bufard, Yu and Lua[1] quality of experience indicated user experience and satisfaction. However, Mushtaq and Mellouk[7] noted that quality of experience is a subjective concept as it is related to individual user's viewpoint and own concept of good quality. As many authors have indicated that quality of experience is related to customer satisfaction, this study considers quality of experience in e-commerce as the customer satisfaction with the service quality offered by the e-commerce platform.

E-Service Quality and Customer Satisfaction: Wolfinbarger and Gilly[11] noted that as quality is related to customer satisfaction, retention and loyalty in both product and service settings, it can be expected to be a determinant of online retailer success as well.

Collier and Bienstock[4] described e-service quality in terms of process, outcome and recovery dimensions. The study found that process quality dimensions, outcome quality evaluations and recovery quality dimensions are very important in determining the satisfaction of the customers. The study highlighted the fact that satisfaction is an important determinant of customer loyalty in e-retailing.

Kim and Kim[6] compared the e-service quality perceptions of the US and South Korean consumers and found that the relationship between overall e-service quality, e-satisfaction and e-loyalty is positive and statistically significant.

Kalia, Arora and Kumalo[5] explored four factors namely, reliability, access, ease of use/ attentiveness and credibility/ security as the service quality dimensions. A statistically significant positive relationship was found between online consumer satisfaction and the different service quality dimensions with the exception of access dimension. The

study confirmed that online customer satisfaction acts as a mediator between e-service quality dimensions and future purchase intentions.

Rita, Oliveira and Farisa[9] emphasised that better service quality enhances satisfaction and trust of customers. The results of the study showed that customer satisfaction had a highest impact on site revisit and repurchase intention.

The past studies showed that service quality has an impact on customer satisfaction and repurchases intention. However, this study aims to know whether the customers who bought personal and healthcare products online during the present COVID-19 situation are satisfied with the quality of service offered by e-commerce platforms or not.

Objectives:
1. To measure the customer evaluation of quality of service offered by online retailers in relation to personal and healthcare products.
2. To evaluate the customer satisfaction with the quality of service offered by e-commerce platforms.

Hypothesis:
H_1: Quality of service offered by online retailers has a significant impact on the quality of customer experience.

Research Methodology: The primary data was collected through administering a structured questionnaire during the period July-September 2021. The sample respondents were selected using the area sampling method. The four administrative divisions of Karnataka were selected for this purpose. The survey instrument was selected from the previous studies with modifications to suit the context of the present study. The dimensions of service quality in e-commerce were extracted through exploratory factor analysis. The impact of service quality on customer satisfaction was analysed with the help of regression analysis. The secondary data was collected from different journals.

Results
Sample: The sample respondents were selected from online customers residing in Karnataka State. The questionnaire was filled by 683 respondents. However, 31 data sets were eliminated from further analysis due to incomplete data. Thus, a total of 652 questionnaires were selected for final analysis.

A majority of respondents were female and more than three-fourth of the respondents were below the age of 40 years. This indicates the increasing number of younger generation shopping online. A vast majority of respondents (90.9 per cent) had an education qualification of graduation and above. Of the total respondents, 76.3 per cent (n=497) shopped online for more than 3 times in a year. The descriptive profile of the respondents is presented in table 1.

Table 1
Respondents Profile

Measure	Items	Percentage
Gender	Male	46.2
	Female	53.8
Age	20-30	47.2
	31-40	29.4
	41-50	13.7
	Above 50	9.7
Area of Residence	Urban	53.8
	Semi-Urban	46.2
Marital Status	Married	59.8
	Unmarried	37.3
	Divorced/ Separated	2.9
Occupation	Employed in Government Entities	39.6
	Employed in Private Entities	45.7
	Self-Employed	12.0
	Retired	2.8
Monthly Income in INR	Above 100000	6.4
	50001-100000	17.0
	40001-50000	18.3
	30001-40000	17.2
	20001-30000	23.2
	Up to 20000	17.9
Years of Online Shopping Experience	Less than a year	37.4
	1-2 years	31.1
	3-4 years	24.1
	5 years and more	7.4

Source: Survey Results

Factors determining Quality of Service in E-commerce Platforms: In order to identify the underlying factors determining the service quality of e-commerce platforms, factor analysis was performed. The factors were extracted using the Principal Component Analysis and Varimax with Kaiser Normalization Rotation method. The results are presented in table 2.

Regression Analysis: The regression analysis was performed to study the associations of eight dimensions of E-Service Quality perceptions with quality of experience or satisfaction of the customers.

For the purpose of analysis, the eight dimensions of e-service quality were taken as independent variables and customer satisfaction was taken as dependent variable. The results of regression analysis is presented in table 3.

Table 3 shows that all the e-service quality dimensions were significantly related to quality of experience of customers at 1 per cent and 5 per cent level. The adjusted R^2 for this model was 63.4 per cent and the model was significant at 1 per cent level.

The results of simple regression analysis revealed that the relationship between the overall quality of service and quality of experience was positive and significant at 1 per cent level. Hence, the hypothesis is accepted. Further, the adjusted R^2 for this model was 60.5 per cent and was also significant at 1 per cent level.

Discussion
One of the significant factors that is capable of bringing in and keeping customers engaged in an e-commerce platform is the overall quality of services offered by it. The dimensions of service quality of online retailers such as physical attributes of the site, ease of use, customer services and complaint redressal by the online retailer, flexibility of services, accuracy of information provided in the website, order fulfilment, returns management, privacy and security features of the site are of extreme significance to the customers to decide as to which online retail platform to select from a wide number of existing platforms.

In the e-commerce market characterised by the existence of a number of online retailers offering similar products and many offering attractive discounts backed by powerful investors, the service quality of online retailers can serve as a differentiating factor.

The results showed that service quality dimensions significantly impact the quality of customer satisfaction with the e-commerce platforms.

Table 2
Factor Loadings and Reliability Scores

Dimension	Indicators	Factor Loadings	Alpha
Physical Attributes of the site	The Website/ App is innovative and has a pleasing appearance	0.633	0.887
	The Website/ App does not have fine-print that is difficult to read	0.685	
	The pictorial information about the item on the site are adequate	0.778	
	The graphics used in the Website/ App are clear	0.746	
	I need not scroll from side to side to adequately see the Web/ App page	0.734	
	The e-retailers Website loads quickly	0.697	
	The Website/ App rarely crash	0.682	
Customer Service and Complaint Redressal	The e-retailer was courteous in trying to resolve my problem	0.755	0.897
	The e-retailer communicated honestly about my problem	0.768	
	The e-retailer gives a chance to the customers to talk to a "live" person using the telephone	0.729	
	The e-retailer was very pleasant to deal with	0.776	
	Adequate compensation was offered for the problems the e-retailer had caused	0.696	
	The e-retailer responded quickly to my complaint or query	0.736	
	The e-retailer adapted their complaint handling procedures to satisfy my needs	0.522	
	The e-retailer had a good procedure for handling the complaints	0.745	
Information Accuracy	The advertised items are available in the inventory of the online retailer	0.609	0.869
	The online retailer gives complete information about the shipping charges	0.707	
	The online retailer gives accurate information about the expected date of delivery	0.715	
	Exact prices are shown alongside the product	0.747	
	Product reviews shown on the site are free from bias	0.695	
	The complete product description is available on the Website/ App	0.598	
	Information given in the site is well-organised	0.532	
	A complete description of policies and charges are given	0.458	
Returns	Online retailer provides convenient option to customers for returning the orders	0.759	0.901
	The e-retailer handles the product returns well	0.785	
	The e-retailer's return policy is simple and easy	0.776	
	The return pick-up is faster	0.778	
	There is no additional charges for returning the order	0.748	
Fulfillment	The products purchased online are delivered by the date promised by the online retailer	0.634	0.767
	Damage rarely occurred during shipping of my order from this e-retailer	0.704	
	The orders are protectively packaged before shipping	0.693	
	The orders from this e-retailer rarely contained wrong item/ incorrect quantity	0.767	
Flexibility	The e-retailer offers numerous payment options to the customers	0.499	0.764
	Choice is given to select the delivery speed	0.549	
	The e-retailer allows me to select the date of delivery	0.643	
	Payment on delivery (PoD) option is available	0.640	
	In case of PoD orders, e-retailer allows me to make payment either in cash or card or e-wallets	0.519	
	Pick-up stores facility is available	0.517	
Privacy and Security	I believe that the Website/ App administrator do not share my personal information with other third parties	0.800	0.845
	I trust the safety of my transactions through this Website/ App	0.839	
	The Website/ App shows the symbols that denote transaction security	0.790	
Ease of Use	This e-retailer has a mobile application along with the website	0.505	0.752
	It is easy to navigate this e-retailer's Website/ App and find the products I need easily	0.591	
	This e-retailer's Website/ App is user friendly	0.549	

Source: Survey results

Table 3
Regression Analysis results between E-service quality dimensions and quality of experience

Independent Variables	Quality of Experience or Customer Satisfaction		
	Co-efficients	t-value	p-value
(constant)	4.757	4.222	.000**
1. Physical Attributes of the site	.066	1.976	.049*
2. Customer Service and Complaint Redressal	.215	7.229	.000**
3. Information Accuracy	.188	5.561	.000**
4. Returns	.296	9.835	.000**
5. Fulfillment	.077	2.802	.005*
6. Flexibility	.141	4.453	.000**
7. Privacy and Security	.109	4.006	.000**
8. Ease of Use	.062	2.001	.046*
F-value	139.124		
p-value	.000**		
Adjusted R^2	.634		

Source: Survey results
Note: ** denotes significance at 1 per cent level and * denotes significance at 5 per cent level

Table 4
Regression Analysis results for overall quality of service and quality of experience.

Independent Variable	Quality of Experience		
	Co-efficients	t-value	p-value
(constant)	4.848	4.597	.000**
Overall Quality of Services	.778	31.618	.000**
F-value	999.715		
p-value	.000**		
Adjusted R^2	.605		

Source: Survey results
Note: ** denotes significance at 1 per cent level

The result is also consistent with the previous studies[4,9,11] which said that customer satisfaction has a positive relationship with service quality dimensions. Further, the study also found that the overall service quality of a shopping website has a significant impact on the customer satisfaction. This result also is consistent with the study by Kim and Kim.[6]

Conclusion
It can be concluded that the service quality of online retailers impacts the customer satisfaction. Thus the online retailers should focus on providing quality and effective services to the customers. The customers look beyond just prices and the service offered by the online retailer plays a significant role in affecting the experience quality of the customers.

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